

ACGCAACTTCGGGCCCAGGGGTCCGCCCCAAGGGGTCCGAAGAGCCTTGAACCGGCCCCGGCTCCTTGACCTTGCTTGT SEQ ID NO:1

GGGCGGAAGGACTGCCCCCTGGGCCTGGGTCCGGGTGTGCCCCCTTCTCACTTGAAGACA.GCAGGCCCTGACTCTCCG

CACACTTGCCCCGCCAGCGACGTACCCCAAGCACCTACGAACTAGTCCCGGGAGCTGGGCAAAGGCACCTACGGGAAG

GTTGATCTGGTGGTCTACAAGGGCACAGGCACAAAA	( M A L K F V N K S K	10
ATG GCA CTG AAG TTT GTG AAC AAG AGC AAA		SEQ ID NO:2
	↑SEQ ID NO:3→	30
T K L K N F L R E V S I T N S L S S S P		30
ACC AAG CTG AAG AAC TTC CTA CGG GAG GTG AGC ATC ACC AAC AGC CTC TCC TCC AGC CCC		90
F I I K V F D V V F E T E D C Y V F A Q		50
TTC ATC ATC AAG GTC TTT GAC GTG GTC TTT GAG ACA GAG GAC TGC TAC GTC TTT GCC CAG		150
E Y A P A G D L F D I I P P Q V G L P E		70
GAG TAC GCA CCT GCT GGG GAC CTG TTT GAC ATC ATC CCT CCC CAG GTG GGG CTC CCT GAG		210
D T V K R C V Q Q L G L A L D F M H G R		90
GAC ACG GTG AAG CGC TGT GTG CAG CAG CTG GGC CTG GCG CTG GAC TTC ATG CAC GGG CGG		270
Q L V H R D I K P E N V L L F D R E C R		110
CAG CTG GTG CAC CGC GAC ATC AAG CCC GAG AAC GTG CTG CTG TTC GAC CGC GAG TGC CGC		330
R V K L A D F G M T R R V G C R V K R V		130
CGC GTA AAG CTG GCC GAC TTC GGC ATG ACG CGC CGC GTG GGC TGC CGC GTC AAG CGC GTG		390
S G T I P Y T A P E V C Q A G R A D G L		150
AGC GGC ACC ATC CCT TAC ACG GCG CCT GAG GTG TGC CAG GCG GGC CGC GCC GAC GGG CTG		450
A V D T G V D V W A F G V L I F C V L T		170
GCG GTG GAC ACG GGC GTG GAC GTG TGG GCC TTC GGC GTG CTC ATC TTC TGC GTG CTC ACC		510
G N F P W E A A S G A D A F F E E F V R		190
GGC AAC TTC CCG TGG GAG GCG GCG TCG GGC GCC GAC GCC TTC TTC GAG GAG TTC GTG CGC		570
W Q R G R L P G L P S Q W R R F T E P A		210
TGG CAG CGG GGC CGC CTG CCG GGG CTG CCT TCG CAG TGG CGC CGC TTC ACC GAG CCC GCG		630
L R M F Q R L L A L E P E R R G P A K E		230
CTG CGC ATG TTC CAG CGC TTA CTG GCC CTG GAG CCC GAG CGC CGC GGC CCA GCC AAG GAG		690
V F R F L K H E L T S E L R R R P S H R		250
GTG TTC CGC TTC CTC AAG CAC GAG CTC ACG TCC GAG CTG CGC CGC CGG CCC TCG CAC CGC		750
A R K P P G D R P P A A G P L R L E A P		270
GCG CGC AAG CCC CCC GGG GAC CGC CCG CCC GCC GCC GGG CCA CTG CGC CTC GAG GCG CCT		810
G P L K R T V L T E S G S G S R P A P P		290
GGG CCG CTC AAG CGG ACG GTG CTG ACC GAG AGC GGC AGC GGC TCC CGG CCC GCG CCC CCC		870
A V G S V P L P V P V P V P V P V P		310
GCC GTC GGG TCG GTG CCC TTG CCC GTG CCG GTG CCG GTG CCA GTG CCC GTG CCG GTG CCT		930

FIG 1A

V P E P G L A P Q G P P G R T D G R A D 330  
 GTG CCC GAG CCC GGC CTA GCT CCC CAG GGG CCC CCC GGC CGG ACC GAC GGC CGC GCG GAC 990  
  
 K S K G Q V V L A T A I E I C V \* 347  
 AAG AGC AAA GGG CAG GTG GTG CTG GCC ACG GCC ATC GAG ATC TGC GTC TGA 1041  
 ←SEQ ID NO:3↑  
 GTGCGCTCCGCCGCCCTCGGACCCGGGAGCAGCCCGGGCCCCGCCCGAGCCGGTGCCCGGTGCGGCGGTAGGGAATGGA  
 GCCACCTCGCCGCGGGGCAGGGGGCGCAGCGGTAGACTAGGCAGGACGCGGCCCGGCACCTGGTCCGTCCCCGGCGGGC  
 TGGTGAGGGGGCCACCAAAGACCCCTAGCGCGGCTGGTGAGCGGGGGCTTGGCCCAGAGGAGCCAAGCCGCACAGACC  
 CGAGAATTGCGAGGCCACCACACAACACACACACACACATACACACACACACACACACGCCAGGAGCAAGGGAGC  
 TTTCGGGCCACACTCCCAGACGCCTCCCTGAGCCCTGGAACCCGGACTCGTTGCTCCTGGCCTTCCATACCCCTGGCA  
 GATCATCCTGCGGTCCCACCCCAGATCCCCTCCTCCTCGCCATCCCATTCTGCCCCCTCCCCACCCTGGGTACAGAAAG  
 GGACTGAAGTGTGTTGGGCAGAGAGGGGGCTTAAGGCCCTGGGCACAGGCTGGGATCAGGGCAGTGAGCGAAGGGCAGCT  
 GTGTCCTGCCCTTCCTTCTGGAGGCTGGAGGGGAGAGGCCAAGCCCTTGAAAAATGTAGCAAATGTCTGGRWKGTGCGA  
 TAAGTGCGTGTATGTGCGGGACAGGCCCCGAGAAGCTAGTGACTCCTGCACACCCCCATTGCACAAATGAAATCACAGC  
 CCAGGAGGGAGGGTAGCTTGGCACTGGCTGAGAAATAGAGCTCTCTCCCCGCCCTCCCCCTAACCACAAGGGATTGTCTC  
 CTGACAACTTGTGGGGATAGAAGGGCTCACAGGGCAGGGGTCTCAGCTGCCCCCATCCTTAGGGCAGGGGAGTTAGTGT  
 GGAGCCGAGAGCAGGTCCCAGCTCCCCCTGCCAGCCGCACTGTCCCAGGGCCAGGGACCTCTGCCGGGTCTCCAGCC  
 CTTGCCACACAGCCTAGACGTAGTAGCCTGGGCTTCCAGCAGGTGGCGAGCTGGTTTCGTGCTGGAAATTTCTCCTGGGT  
 TTTCTTGGGGTCAAACATGCCAACCTCCAAGACCCCATCCTCACGTCTCCCACTTTTCTGGCGCTGGAGTGTGCAGGGCG  
 TAGGACCTGCATGTGTGGGTGTGAGAATGGGGGCCGGTGGACACCAGGGGGCGAGTGTGTGACTAGGTGTGTGTGCACA  
 TGTGTAGGGTGCAGACGCATGGGTGCCATCCTTTGCNTTCAATGACTGTGCGTCCAGACCCCCAAAAAGCGGGCCCCCCC  
 ACCACACCCTGNTCCTCCCAGGCAGCTGTCCCAGGGCGCCCAGGCCTGCCTTGCAACACAGCCCTCAGGAAATCCGGCA  
 AGGAGGCCCCCTGCAGGTTGGTTCANGCCCAGGTAGCAAAACAGAGACAACAGCAGCCCCGCTGACCCCTGCCCTNT  
 CTGTGGAGGCCCCGGGACCCCCGAATAAGCACCATGGGTGAGGCTGTCCCTGTCAGGGNCCCCTGCCAGGGTCCCTC  
 CTGGGGTTCTGGGCCATTTGAGGGGCTCTTTGATGGGCCAGGCCNGCCAGAGTGAACCTCCGAGCACTTTCTGGCTGGT

FIG 1B

094630.02201  
T0220.0629660

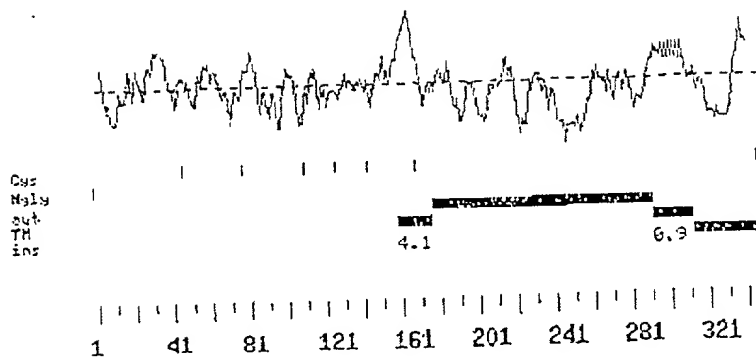


Fig. 2

```

      *->vAvKilkkesls....lrEiqilkrIs.HpNivrlIgvfedtdhhly  SEQ ID NO:7
      +A+K ++k++++ ++ lrE++i ++ls+ p+I+++++v+ +t+d +
32374      1      MALKFVNKSKTKlknfLREVSITNSLSsSPFIKVFVDVVFETEDCYV 47

      lvmEymegGdLfdyIrrngplsekeakkialQilrGleYlHsngivHRDL
      + +Ey++ GdLfd++ + l+e+ +k+++ Q+ +l+++H++ vHRD+
32374      48      FAQEYAPAGDLFDIIPPQVGLPEDTVKRCVQQLGLALDFMHGRQLVHRDI 97

      KpeNIllden..gtvKiaDFGLArll.eklTtfvGTpwYmmAPEvileg.
      KpeN+Ll +++ vK+aDFG+ r ++ + + + GT++Y APEv + +
32374      98      KPENVLLFDRecRRVKLADFGMTRRVgCRVKRVSGTIPYT-APEV-CQAg 145

      ....rgysskvDvWSlGviLyElltgggplfpgadlpaftggdevdqliif
      + ++ ++ vDvW++Gv+++ +ltg
32374      146      radgLAVDTGVDVWAFGVLIFCVLTG----- 171

      vlklPfsdelpktridpleelfrikkr.....rlplpsncSeelkdL
      P++ + ++ ++ f+ r ++++ ++++ ++++ e+++
32374      172      --NFPWEAA-----SGADAFFEFVRwqrgrlpgLPSQWRRFTEPALRM 213

      lkKcLnkDPskRpGsatakei<-*
      ++L++ P++R ake+
32374      214      FQRLLALEPERRG---PAKEV 231

```

Fig. 3

```

Query:      226      GPAKEVFRFLKHELTSELRRRPShrARKPPGDRPPAAGPLRLEAPGPLKRTVLTESGSGS 285
              GPAKEVFRFLKHELTSELRRRPShrARKPPGDR P  GPLRLEAPGPLKRTVLTESGSGS
Sbjct:      1      GPAKEVFRFLKHELTSELRRRPShrARKPPGDRLP--GPLRLEAPGPLKRTVLTESGSGS 58  SEQ ID NO:8

Query:      286      R 286
              R
Sbjct:      59      R 59

```

Fig. 4

```

Query:      321      PPGRTDGRADKSKGQVVLATAIEICV 346
              PPGRTDGRADKSKGQVVLATAIEICV
Sbjct:      89      PPGRTDGRADKSKGQVVLATAIEICV 114  SEQ ID NO:9

```

Fig 5

```

Query:      166      FCVLTGNFPWEAASGADAFFEFVRWQGRLPGLPSQWRRFTEPALRMFQRLLALEPERR 225
              +C + G FPW+ AS + E+ +W + + P LP ++ F+E AL++F++ L + R
Sbjct:      3      YC-MKGKFPWQKASIMCKPYWEWEQWLKRKNPALPKFNPfSEKALKLfkKSLTPRFKDR 61  SEQ ID NO:10

Query:      226      GPAKEVFRFL-KHELTSELRR 245
              AK++ + L K +L ++R
Sbjct:      62      WTAKDMRKCLAKEKLLKSVKR 82

```

Fig. 6

T02220" 05/29/96

1. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1996. 1997. 1998. 1999. 2000. 2001. 2002. 2003. 2004. 2005. 2006. 2007. 2008. 2009. 2010. 2011. 2012. 2013. 2014. 2015. 2016. 2017. 2018. 2019. 2020. 2021. 2022. 2023. 2024. 2025. 2026. 2027. 2028. 2029. 2030. 2031. 2032. 2033. 2034. 2035. 2036. 2037. 2038. 2039. 2040. 2041. 2042. 2043. 2044. 2045. 2046. 2047. 2048. 2049. 2050. 2051. 2052. 2053. 2054. 2055. 2056. 2057. 2058. 2059. 2060. 2061. 2062. 2063. 2064. 2065. 2066. 2067. 2068. 2069. 2070. 2071. 2072. 2073. 2074. 2075. 2076. 2077. 2078. 2079. 2080. 2081. 2082. 2083. 2084. 2085. 2086. 2087. 2088. 2089. 2090. 2091. 2092. 2093. 2094. 2095. 2096. 2097. 2098. 2099. 2100. 2101. 2102. 2103. 2104. 2105. 2106. 2107. 2108. 2109. 2110. 2111. 2112. 2113. 2114. 2115. 2116. 2117. 2118. 2119. 2120. 2121. 2122. 2123. 2124. 2125. 2126. 2127. 2128. 2129. 2130. 2131. 2132. 2133. 2134. 2135. 2136. 2137. 2138. 2139. 2140. 2141. 2142. 2143. 2144. 2145. 2146. 2147. 2148. 2149. 2150. 2151. 2152. 2153. 2154. 2155. 2156. 2157. 2158. 2159. 2160. 2161. 2162. 2163. 2164. 2165. 2166. 2167. 2168. 2169. 2170. 2171. 2172. 2173. 2174. 2175. 2176. 2177. 2178. 2179. 2180. 2181. 2182. 2183. 2184. 2185. 2186. 2187. 2188. 2189. 2190. 2191. 2192. 2193. 2194. 2195. 2196. 2197. 2198. 2199. 2200. 2201. 2202. 2203. 2204. 2205. 2206. 2207. 2208. 2209. 2210. 2211. 2212. 2213. 2214. 2215. 2216. 2217. 2218. 2219. 2220. 2221. 2222. 2223. 2224. 2225. 2226. 2227. 2228. 2229. 2230. 2231. 2232. 2233. 2234. 2235. 2236. 2237. 2238. 2239. 2240. 2241. 2242. 2243. 2244. 2245. 2246. 2247. 2248. 2249. 2250. 2251. 2252. 2253. 2254. 2255. 2256. 2257. 2258. 2259. 2260. 2261. 2262. 2263. 2264. 2265. 2266. 2267. 2268. 2269. 2270. 2271. 2272. 2273. 2274. 2275. 2276. 2277. 2278. 2279. 2280. 2281. 2282. 2283. 2284. 2285. 2286. 2287. 2288. 2289. 2290. 2291. 2292. 2293. 2294. 2295. 2296. 2297. 2298. 2299. 2300. 2301. 2302. 2303. 2304. 2305. 2306. 2307. 2308. 2309. 2310. 2311. 2312. 2313. 2314. 2315. 2316. 2317. 2318. 2319. 2320. 2321. 2322. 2323. 2324. 2325. 2326. 2327. 2328. 2329. 2330. 2331. 2332. 2333. 2334. 2335. 2336. 2337. 2338. 2339. 2340. 2341. 2342. 2343. 2344. 2345. 2346. 2347. 2348. 2349. 2350. 2351. 2352. 2353. 2354. 2355. 2356. 2357. 2358. 2359. 2360. 2361. 2362. 2363. 2364. 2365. 2366. 2367. 2368. 2369. 2370. 2371. 2372. 2373. 2374. 2375. 2376. 2377. 2378. 2379. 2380. 2381. 2382. 2383. 2384. 2385. 2386. 2387. 2388. 2389. 2390. 2391. 2392. 2393. 2394. 2395. 2396. 2397. 2398. 2399. 2400. 2401. 2402. 2403. 2404. 2405. 2406. 2407. 2408. 2409. 2410. 2411. 2412. 2413. 2414. 2415. 2416. 2417. 2418. 2419. 2420. 2421. 2422. 2423. 2424. 2425. 2426. 2427. 2428. 2429. 2430. 2431. 2432. 2433. 2434. 2435. 2436. 2437. 2438. 2439. 2440. 2441. 2442. 2443. 2444. 2445. 2446. 2447. 2448. 2449. 2450. 2451. 2452. 2453. 2454. 2455. 2456. 2457. 2458. 2459. 2460. 2461. 2462. 2463. 2464. 2465. 2466. 2467. 2468. 2469. 2470. 2471. 2472. 2473. 2474. 2475. 2476. 2477. 2478. 2479. 2480. 2481. 2482. 2483. 2484. 2485. 2486. 2487. 2488. 2489. 2490. 2491. 2492. 2493. 2494. 2495. 2496. 2497. 2498. 2499. 2500. 2501. 2502. 2503. 2504. 2505. 2506. 2507. 2508. 2509. 2510. 2511. 2512. 2513. 2514. 2515. 2516. 2517. 2518. 2519. 2520. 2521. 2522. 2523. 2524. 2525. 2526. 2527. 2528. 2529. 2530. 2531. 2532. 2533. 2534. 2535. 2536. 2537. 2538. 2539. 2540. 2541. 2542. 2543. 2544. 2545. 2546. 2547. 2548. 2549. 2550. 2551. 2552. 2553. 2554. 2555. 2556. 2557. 2558. 2559. 2560. 2561. 2562. 2563. 2564. 2565. 2566. 2567. 2568. 2569. 2570. 2571. 2572. 2573. 2574. 2575. 2576. 2577. 2578. 2579. 2580. 2581. 2582. 2583. 2584. 2585. 2586. 2587. 2588. 2589. 2590. 2591. 2592. 2593. 2594. 2595. 2596. 2597. 2598. 2599. 2600. 2601. 2602. 2603. 2604. 2605. 2606. 2607. 2608. 2609. 2610. 2611. 2612. 2613. 2614. 2615. 2616. 2617. 2618. 2619. 2620. 2621. 2622. 2623. 2624. 2625. 2626. 2627. 2628. 2629.

Fig. 8

```

Query:      77 VQQLGLALDFMHGRQLVHRDIKPENVLL---FDRECRRVKLADFGMTR-----RVGCRVK 128
           + QL  A  ++H  ++  RD+K +N+LL  FD E  ++ +ADFG          +V
Sbjct:     319 IAQLLEACTYLHKHKVAQRDMKSDNILLE YDFDDEIPQLVVADFGCALACDNWQVDYESD 378  SEQ ID NO:13

Query:     129 RVS--GTIPYTAPEVCQAGRADGLAVDTGV-DVWAFGVLFICVLGTGNFPWEAAAGADAFF 185
           VS  G      APE+  A      + V+  + D WA G L  + VLT  + P+
Sbjct:     379 EVSLGGNAKTKAPEIATAVPGKNVKVNFEMADTWAAGGLSYEVLTRSNPFYKLL----- 432

Query:     186 EEFVRWQGRGLPGLPSQ 202
           +   +Q   LP LPS+
Sbjct:     433 -DTATYQESELPALPSR 448

```

Fig. 9

Fig. 10

```

Query:      30 PFIIVKVDVVFETEDCYVFAQEYAPAGDLFDIIPPQVGLP---EDTVKRCVQQLGLALD 85
             P I + + +V E + C++ QE      G + +      G+P      E+ +      +QQL LD
Sbjct:      71 PGILAIENVSEEDRCFLVTQEND--GPILSLTQYLGIPRKLTEEEIVDIIQQLCSLLD 128  SEQ ID NO:15

Query:      86 FMHGRQLVHRDIKPENVLL-FDRECRRVKLADFMTTRVGC-----VKRV 130
             ++H   L H      +V + F      + L D G      + R      +++++
Sbjct:      129 YVHSEGLAHGQWNLHSHVHIHFLNGVPNIYLPDLGFASLIRERMFDFGMQDEENRESIEKI 188

Query:      131 SGTIPYTAPEVCQAGRADGLAVDTGVDVWAFGVLIFCVLTGNFPWEAASGADAFFEFV 189
             + + PE Q      +G DT      +AFG + + +L G FPW      F +F+
Sbjct:      189 RDRLLFHTPEGKQT---NGRETDT---YAFGAITYYLLFGFFPWGIFPKPSKCFPDFI 240

```

Fig. 11

|        |     |   |     |              |
|--------|-----|---|-----|--------------|
| Query: | 29  | SPFI IKVFDVVFETEDC-YVFAQEYAPAGDLFDIIPPQVGLP EDTVKRCVQQLGLALDFM    | 87  |              |
|        |     | SP ++ V D++ E E VF E L +++ PE ++ L L                              |     |              |
| Sbjct: | 82  | SPHVL PVRDLIDEGEWLSLVF--EPRRTITLRELLSAGPV SPE-LLQPLTTALFEGLSAA    | 138 | SEQ ID NO:16 |
|        |     |   |     |              |
| Query: | 88  | HGRQLVHRDIKPENVLLFDRECRVKLADFGMTRRVGCRVKRVSGTIP-YTAPEVCQAGR       | 146 |              |
|        |     | H L+H I PE V FD + +R LA+FG+ RR ++ P Y APE+ G                      |     |              |
| Sbjct: | 139 | HQGALLHTQISPEAVW-FDTQ-KRPLLA EFG LARRTAQELRDHWP HDP RYAAP ELLSGG- | 195 |              |
|        |     |   |     |              |
| Query: | 147 | ADGLAVDTGVDVWAFGVLIFCVLTGNFPWEAASGADAF FEEFVRWQRGRLP----GLPSQ     | 202 |              |
|        |     | D++A + EAA+G A R Q RLP G+P Q                                      |     |              |
| Sbjct: | 196 | ----PYTPQTDLYALAAATLL-----EAATGT-ALSPVSARQQGVRLPSWPAGIPPQ         | 241 |              |
|        |     |   |     |              |
| Query: | 203 | WRRFTEPALRMFQRL LALEPERRGPAKEVFRFLKH-ELTSELRRRPSHRARKPPGDRPPA     | 261 |              |
|        |     | E L++ + A+ A EV L+ + T + + A P PPA                                |     |              |
| Sbjct: | 242 | VAHALESCLQLDPAVRAVS-----AAEVLEELRRAQPTQAILSQQEPPAPPPSVPSPPA       | 295 |              |
|        |     |   |     |              |
| Query: | 262 | A   | 262 |              |
|        |     | A   |     |              |
| Sbjct: | 296 | A   | 296 |              |

094690 072701

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 CCTTGGCTGACTTGGCTCGCGAGCAAAGGGCAGCGTCTGAGCTCCCGGCGTTCCAGGAGTGGCCTCTTTTGTAGGAGCA  
 CCTGAAATGCAGCGTCTGGTGCACTAAGCCGTAGCGGCAGCAGCAGCCACAGCGACAGCGCTGGGGCCCTGTGTAGAAG  
 CTCCATCCCCCTTGTCTTTGTGCTTGCCTGCGTCCCCAGACTCAGAGATTATCTTAGAAGACCTAGGACTCCAAAA  
 M F P L K D A E M G A F T F F A S A L P 20 SEQ ID NO:5  
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 ↑SEQ ID NO:6→  
 H D V C G S N G L P L T P N S I K I L G 40  
 CAT GAT GTT TGT GGA AGC AAT GGA CTT CCT CTC ACA CCA AAT TCC ATC AAA ATT TTA GGG 120  
 R F Q I L K T I T H P R L C Q Y V D I S 60  
 CGC TTT CAA ATC CTT AAA ACC ATC ACC CAT CCC AGA CTC TGC CAG TAT GTG GAT ATT TCT 180  
 R G K H E R L V V V A E H C E R S L E D 80  
 AGG GGA AAG CAT GAA CGA CTA GTG GTC GTG GCT GAA CAT TGT GAA CGT AGT CTG GAA GAC 240  
 L L R E R K P V S C S T V L C I A F E V 100  
 TTG CTT CGA GAA AGG AAA CCT GTG AGC TGT TCA ACG GTT TTG TGT ATA GCA TTT GAG GTT 300  
 L Q G L Q Y M N K H G I V H R A L S P H 120  
 CTT CAG GGC TTG CAG TAT ATG AAC AAA CAT GGT ATA GTA CAC AGG GCA TTG TCT CCT CAT 360  
 N I L L D R K G H I K L A K F G L Y H M 140  
 AAT ATC CTG TTG GAC CGA AAG GGA CAT ATT AAA TTG GCT AAA TTT GGA CTT TAT CAC ATG 420  
 T A H G D D V D F P I G Y P S Y L A P E 160  
 ACA GCT CAT GGT GAT GAT GTT GAT TTC CCA ATA GGG TAT CCC TCG TAC TTG GCC CCT GAG 480  
 V I A Q G I F K T T D H M P S K K P L P 180  
 GTA ATT GCA CAG GGA ATT TTC AAA ACC ACT GAT CAC ATG CCA AGT AAA AAA CCA TTG CCT 540  
 S G P K S D V W S L G I I L F E L C V G 200  
 TCT GGC CCC AAA TCA GAT GTA TGG TCT CTT GGA ATC ATT TTA TTT GAG CTT TGT GTG GGA 600  
 R K L F Q S L D I S E R L K F L L T L D 220  
 AGA AAA TTA TTT CAG AGC TTG GAT ATT TCT GAA AGA CTA AAA TTT TTG CTT ACT TTG GAT 660  
 C V D D T L I V L A E E H G C L D I I K 240  
 TGT GTA GAT GAC ACT TTA ATA GTT CTG GCT GAA GAG CAT GGT TGT TTG GAC ATT ATA AAG 720  
 E L P E T V I D L L N K C L T F H P S K 260  
 GAG CTT CCT GAA ACT GTG ATA GAT CTT TTG AAT AAG TGC CTT ACC TTC CAT CCT TCT AAG 780

Fig. 13A

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| R   | P   | T   | P   | D   | E   | L   | M   | K   | D   | K   | V   | F   | S   | E   | V   | S   | P   | L   | Y   | 280  |
| AGG | CCA | ACC | CCA | GAT | GAA | TTA | ATG | AAG | GAC | AAA | GTA | TTC | AGT | GAG | GTA | TCA | CCT | TTA | TAT | 840  |
| T   | P   | F   | T   | K   | P   | A   | S   | L   | F   | S   | S   | S   | L   | R   | C   | A   | D   | L   | T   | 300  |
| ACC | CCC | TTT | ACC | AAA | CCT | GCC | AGT | CTG | TTT | TCA | TCT | TCT | CTG | AGA | TGT | GCT | GAT | TTA | ACT | 900  |
| L   | P   | E   | D   | I   | S   | Q   | L   | C   | K   | D   | I   | N   | N   | D   | Y   | L   | A   | E   | R   | 320  |
| CTG | CCT | GAG | GAT | ATC | AGT | CAG | TTG | TGT | AAA | GAT | ATA | AAT | AAT | GAT | TAC | CTG | GCA | GAA | AGA | 960  |
| S   | I   | E   | E   | V   | Y   | Y   | L   | W   | C   | L   | A   | G   | G   | D   | L   | E   | K   | E   | L   | 340  |
| TCT | ATT | GAA | GAA | GTG | TAT | TAC | CTT | TGG | TGT | TTG | GCT | GGA | GGT | GAC | TTG | GAG | AAA | GAG | CTT | 1020 |
| V   | N   | K   | E   | I   | I   | R   | S   | K   | P   | P   | I   | C   | T   | L   | P   | N   | F   | L   | F   | 360  |
| GTC | AAC | AAG | GAA | ATC | ATT | CGA | TCC | AAA | CCA | CCT | ATC | TGC | ACA | CTC | CCC | AAT | TTT | CTC | TTT | 1080 |
| E   | D   | G   | E   | S   | F   | G   | Q   | G   | R   | D   | R   | S   | S   | L   | L   | D   | D   | T   | T   | 380  |
| GAG | GAT | GGT | GAA | AGC | TTT | GGA | CAA | GGT | CGA | GAT | AGA | AGC | TCG | CTT | TTA | GAT | GAT | ACC | ACT | 1140 |
| V   | T   | L   | S   | L   | C   | Q   | L   | R   | N   | R   | L   | K   | D   | V   | G   | G   | E   | A   | F   | 400  |
| GTG | ACA | TTG | TCG | TTA | TGC | CAG | CTA | AGA | AAT | AGA | TTG | AAA | GAT | GTT | GGT | GGA | GAA | GCA | TTT | 1200 |
| Y   | P   | L   | L   | E   | D   | D   | Q   | S   | N   | L   | P   | H   | S   | N   | S   | N   | N   | E   | L   | 420  |
| TAC | CCA | TTA | CTT | GAA | GAT | GAC | CAG | TCT | AAT | TTA | CCT | CAT | TCA | AAC | AGC | AAT | AAT | GAG | TTG | 1260 |
| S   | A   | A   | A   | T   | L   | P   | L   | I   | I   | R   | E   | K   | D   | T   | E   | Y   | Q   | L   | N   | 440  |
| TCT | GCA | GCT | GCC | ACG | CTC | CCT | TTA | ATC | ATC | AGA | GAG | AAG | GAT | ACA | GAG | TAC | CAA | CTA | AAT | 1320 |
| R   | I   | I   | L   | F   | D   | R   | L   | L   | K   | A   | Y   | P   | Y   | K   | K   | N   | Q   | I   | W   | 460  |
| AGA | ATT | ATT | CTC | TTC | GAC | AGG | CTG | CTA | AAG | GCT | TAT | CCA | TAT | AAA | AAA | AAC | CAA | ATC | TGG | 1380 |
| K   | E   | A   | R   | V   | D   | I   | P   | P   | L   | M   | R   | G   | L   | T   | W   | A   | A   | L   | L   | 480  |
| AAA | GAA | GCA | AGA | GTT | GAC | ATT | CCT | CCT | CTT | ATG | AGA | GGT | TTA | ACC | TGG | GCT | GCT | CTT | CTG | 1440 |
| G   | V   | E   | G   | A   | I   | H   | A   | K   | Y   | D   | A   | I   | D   | K   | D   | T   | P   | I   | P   | 500  |
| GGA | GTT | GAG | GGA | GCT | ATT | CAT | GCC | AAG | TAC | GAT | GCA | ATT | GAT | AAA | GAC | ACT | CCA | ATT | CCT | 1500 |
| T   | D   | R   | Q   | I   | E   | V   | D   | I   | P   | R   | C   | H   | Q   | Y   | D   | E   | L   | L   | S   | 520  |
| ACA | GAT | AGA | CAA | ATT | GAA | GTG | GAT | ATT | CCT | CGC | TGT | CAT | CAG | TAC | GAT | GAA | CTG | TTA | TCA | 1560 |
| S   | P   | E   | G   | H   | A   | K   | F   | R   | R   | V   | L   | K   | A   | W   | V   | V   | S   | H   | P   | 540  |
| TCA | CCA | GAA | GGT | CAT | GCA | AAA | TTT | AGG | CGT | GTA | TTA | AAA | GCC | TGG | GTA | GTG | TCT | CAT | CCT | 1620 |
| D   | L   | V   | Y   | W   | Q   | G   | L   | D   | S   | L   | C   | A   | P   | F   | L   | Y   | L   | N   | F   | 560  |
| GAT | CTT | GTG | TAT | TGG | CAA | GGT | CTT | GAC | TCA | CTT | TGT | GCT | CCA | TTC | CTA | TAT | CTA | AAC | TTC | 1680 |
| N   | N   | E   | A   | L   | A   | Y   | A   | C   | M   | S   | A   | F   | I   | P   | K   | Y   | L   | Y   | N   | 580  |
| AAT | AAT | GAA | GCC | TTG | GCT | TAT | GCA | TGT | ATG | TCT | GCT | TTT | ATT | CCC | AAA | TAC | CTG | TAT | AAC | 1740 |
| F   | F   | L   | K   | D   | N   | S   | H   | V   | I   | Q   | E   | Y   | L   | T   | V   | F   | S   | Q   | M   | 600  |
| TTC | TTC | TTA | AAA | GAC | AAC | TCA | CAT | GTA | ATA | CAA | GAG | TAT | CTG | ACT | GTC | TTC | TCT | CAG | ATG | 1800 |
| I   | A   | F   | H   | D   | P   | F   | L   | S   | N   | H   | L   | N   | E   | I   | G   | F   | -   | P   | D   | 620  |
| ATT | GCA | TTT | CAT | GAT | CCA | GAG | CTG | AGT | AAT | CAT | CTC | AAT | GAG | ATT | GGT | TTC | ATT | CCA | GAT | 1860 |
| L   | Y   | A   | I   | P   | W   | F   | L   | T   | M   | F   | T   | H   | V   | F   | P   | L   | H   | K   | I   | 640  |
| CTC | TAT | GCC | ATC | CCT | TGG | TTT | CTT | ACC | ATG | TTT | ACT | CAT | GTA | TTT | CCA | CTA | CAC | AAA | ATT | 1920 |

Fig. 13B



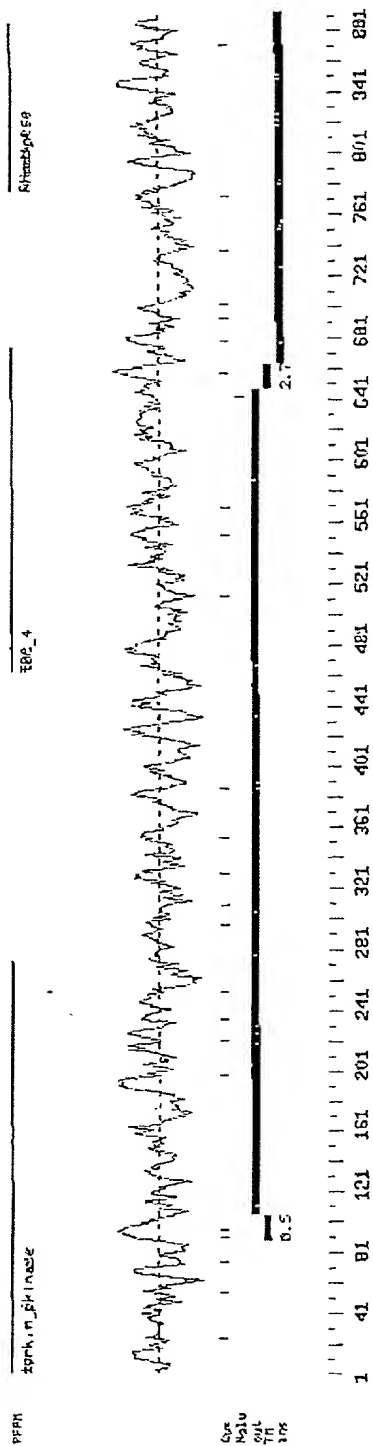
|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| F   | H   | L   | W   | D   | T   | L   | L   | G   | N   | S   | S   | F   | P   | F   | C   | I   | G   | V   | 660 |      |
| TTC | CAC | CTC | TGG | GAT | ACC | TTA | CTA | CTT | GGG | AAT | TCC | TCT | TTC | CCA | TTC | TGT | ATT | GGA | GTA | 1980 |
| A   | I   | L   | Q   | Q   | L   | R   | D   | R   | L   | L   | A   | N   | G   | F   | N   | E   | C   | I   | L   | 680  |
| GCA | ATT | CTT | CAG | CAG | CTG | CGG | GAC | CGG | CTT | TTG | GCT | AAT | GGC | TTT | AAT | GAG | TGT | ATT | CTT | 2040 |
| L   | F   | S   | D   | L   | P   | E   | I   | D   | I   | E   | R   | C   | V   | R   | E   | S   | I   | N   | L   | 700  |
| CTC | TTC | TCC | GAT | TTA | CCA | GAA | ATT | GAC | ATT | GAA | CGC | TGT | GTG | AGA | GAA | TCT | ATC | AAC | CTG | 2100 |
| F   | C   | W   | T   | P   | K   | S   | A   | T   | Y   | R   | Q   | H   | A   | Q   | P   | P   | K   | P   | S   | 720  |
| TTT | TGT | TGG | ACT | CCT | AAA | AGT | GCT | ACT | TAC | AGA | CAG | CAT | GCT | CAA | CCT | CCA | AAG | CCA | TCT | 2160 |
| S   | D   | S   | S   | G   | G   | R   | S   | S   | A   | P   | Y   | F   | S   | A   | E   | C   | P   | D   | P   | 740  |
| TCT | GAC | AGC | AGT | GGA | GGC | AGA | AGT | TCG | GCA | CCT | TAT | TTC | TCT | GCT | GAG | TGT | CCA | GAT | CCT | 2220 |
| P   | K   | T   | D   | L   | S   | R   | E   | S   | I   | P   | L   | N   | D   | L   | K   | S   | E   | V   | S   | 760  |
| CCA | AAG | ACA | GAT | CTG | TCA | AGA | GAA | TCC | ATC | CCA | TTA | AAT | GAC | CTG | AAG | TCA | GAA | GTA | TCA | 2280 |
| P   | R   | I   | S   | A   | E   | D   | L   | I   | D   | L   | C   | E   | L   | T   | V   | T   | G   | H   | F   | 780  |
| CCA | CGG | ATT | TCA | GCA | GAG | GAC | CTG | ATT | GAC | TTG | TGT | GAG | CTC | ACA | GTG | ACA | GGC | CAC | TTC | 2340 |
| K   | T   | P   | S   | K   | K   | T   | K   | S   | S   | K   | P   | K   | L   | L   | V   | V   | D   | I   | R   | 800  |
| AAA | ACA | CCC | AGC | AAG | AAA | ACA | AAG | TCC | AGT | AAA | CCA | AAG | CTC | CTG | GTG | GTT | GAC | ATC | CGG | 2400 |
| N   | S   | E   | D   | F   | I   | R   | G   | H   | I   | S   | G   | S   | I   | N   | I   | P   | F   | C   | A   | 820  |
| AAT | AGT | GAA | GAC | TTT | ATT | CGT | GGT | CAC | ATT | TCA | GGA | AGC | ATC | AAC | ATT | CCA | TTC | AGT | GCT | 2460 |
| A   | F   | T   | A   | E   | G   | E   | L   | T   | Q   | G   | P   | Y   | T   | A   | M   | L   | Q   | N   | F   | 840  |
| GCC | TTC | ACT | GCA | GAA | GGG | GAG | CTT | ACC | CAG | GGC | CCT | TAC | ACT | GCT | ATG | CTC | CAG | AAC | TTC | 2520 |
| K   | G   | K   | V   | I   | V   | I   | V   | G   | H   | V   | A   | K   | H   | T   | A   | E   | F   | A   | A   | 860  |
| AAA | GGG | AAG | GTC | ATT | GTC | ATC | GTG | GGG | CAT | GTG | GCA | AAA | CAC | ACA | GCT | GAG | TTT | GCA | GCT | 2580 |
| H   | L   | V   | K   | M   | K   | Y   | P   | R   | I   | C   | I   | L   | D   | G   | G   | I   | N   | K   | I   | 880  |
| CAC | CTT | GTG | AAG | ATG | AAA | TAT | CCA | AGA | ATC | TGT | ATT | CTA | GAT | GGT | GGC | ATT | AAT | AAA | ATA | 2640 |
| K   | P   | T   | G   | L   | L   | T   | I   | P   | S   | P   | Q   | I   | *   |     |     |     |     |     |     | 894  |
| AAG | CCA | ACA | GGC | CTC | CTC | ACC | ATC | CCA | TCT | CCT | CAA | ATA | TGA |     |     |     |     |     |     | 2682 |

AGAACCAAGAGTGTGACTGCCAAAACCTTAGTGTGGCATCAGCACCAACAGCACAGTTCTTCATATCCACGCCACTCTCA  
GACAAAAC TAGATGTCCAGATTGTTGCATTTCCGTAAAGTTTGTACAGAGACATTTTTTTAAATCTCATAACCCACATG  
TTCAGTTATCCATGCAAGAACTTGACTCTACATGTATTGCTGAAAGAATTTTCTTAACAGTGAAATCTGATCATATAT  
TTTTACCACACTGCCACATAAAGCCCCAAGAAATTCAGCTGACAAGACAGATTTAGCATTATCAAGAAATC ATTTGCC  
CTGAAAAAGCTGTCTCTCCATTGTACTGAACAGACAGTCCTGTCGATTGTGTTATTTAGAAACATACACTGAATGTGGGC  
TGAAATCATCATCTTTCCATAATGAAAAC TGAGAACTATTACACAATGCATTCCCTTATAAAATAAATGCTACATTTAGTA  
ACTCATTTACCCAAACAAGAAAGATGTGTGTGTGTGTGTGTATAGGAAGTGGAGTTTATCCCCATTGC; .AAACTC  
AATACTTACTCCCAGAAAAATGAAATTTAGAAACCATTATATTTGATAGAATATTTGGTCAGTTCCTGTAGCAAAGAC  
GAATGGCTTAAACAAATTTTCTAGTTTCTTTATCACATGAAAGTCTGTACAGTCAGTCCAGGGCTAGTCTACTGGTTTC

**Fig. 13C**

CTGATCATTAAAGAACTCATTACCTTCTCTCATTGCTTTACAAACCTCAATATGTGGCATCCATCTCATGGATGAAAATG  
GCTCCTCAGCTTCTACCATCACATCTGCTATCTAGAAGGAAGAGAATGAGGGAAGGAGGGAGGGGATGAAGAGAAAAGA  
AGGAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Fig. 13D

[illegible]

**Fig. 14**

```

*->qilkrslHpNivrlvgfedtdhlylvmEymegGdLfdylrrngpl SEQ ID NO:17
qilk++ Hp ++++ ++ + ++l +v E++e +L d+lr+++p
18431 43 QILKTITHPRLCQYVDISRGKHERLVVVAEHCE-SLEDLLRERKPV 88

sekeakkialQilrGleYlHsngivHRDLKpeNIlldengtvKiaDFGLA
s +++ia ++l+Gl+Y+ +givHR L p NIlld++g++K+a FGL
18431 89 SCSTVLCAIEVLQGLQYMNKHGIVHRALSPHNILLDRKGHIKLAKEFLY 138

rll...eklttfvGTpwYmmAPEvi.....leg.rgysskvDv
++ G p Y APEvi ++ +++++ + + + + ++k+Dv
18431 139 HMTahgDDVDFPIGYPSYL-APEVIaaggifktt dhmpSKKpLPSGPKSDV 187

WSlGviLyElItggplfpgadlpafTggdevdqliifvklPfsdelpkt
WSlG+iL+El+ g++lf+++d ++ l +
18431 188 WSLGIILFELCVGRKLFQSLD-----ISERLKFLTL 219

ridpleelfrikkr.rlpplsncSeelkdLlkkcLnkDPskRpGsatake
++ ++ +++ l++ +++++e+++dLl+kCL++ PskRp t e
18431 220 DCVDDTLIVLAEEHgCLDI IKELPETVIDLLNKCLTFHPSKRP---TPDE 266

ilnhpwf<-*
+++++ f
18431 267 LMKDKVF 273

```

Fig. 15

```

*->vrqgvpslRgkVWklllgagelnnclltdnfkgldlfglvpllla SEQ ID NO:18
r +p +Rg W++llg +
18431 463 ARVDIPPLMRGLTWAALLGVEGAI----- 486

dkdeYeelllnknektvqdqneKssvgirrdyVEAVEKHPLSDDNDKTK
Y++++ ++ +t
18431 487 -HAKYDAIDKDTPIPT----- 501

GSLeKgsdekalklredldkIekDlsRTfpdeiffqtrlaeqqlkkdqdl
+ +Ie D+ R+ + +++
18431 502 -----DRQIEVDIPRCHQYDELL----- 519

daydkDEfddeddkneppsikqLrrlLvaYswknpqehlgYvQGMnvils
+p+++++ rr+L a ++ +p+ l Y QG + +
18431 520 -----SSPEGHAKFRRVLKAWVVSHPD--LVYWQGLDSLCA 553

pLLlf.lkhgvdIdeideeqAFwclvkLmdnylpqkyflndls.glnedl
p+L++++ +e A++c ++++ +yl + +fl+d s+ ++e l
18431 554 PFLYLnFN-----NEALAYACMSAFIPKYLYN-FFLKDNShVIQEYL 594

rvLdslvkeslPeLyshlkkkenktgsgkKknllaldltllifafpwfLt
v++ + + +PeL++hl+ + +++++a+pwfLt
18431 595 TVFSQMIAFHDPELS NHLNEI-----GFIPDLAIPWFLT 629

lFarelPleivlrIwDilftyYlgshflifvalAiLklkklkh<-*
F+ ++Pl +++++wD l++ +s+f++ +++AiL++l++ ll+
18431 630 MFTHVFPLHKIFHLWDTLLLG--NSSFPFCIGVAILQQLRDRLLAN 673

```

Fig. 16

Query: 459 IWKEARVDIPPLMRGLTWAALLGVEGAIHAKYDAIDKDT-----PIPTDRQIEVDIPRC 512  
 I +E +D+PP +RG W LL V + +Y +D P P DRQ+EVDIPRC  
 Sbjct: 1 IQRETNIDVPPTLRGEVWGCLLRVPPSARTRYALLDHAVHHTAAKPTPHDRQLEVDIPRC 60 SEQ ID NO:19

Query: 513 HQYDELLSSPEGHAKFRRVLKAWVSH--PDLVYWQGLDSLCAFLYLNFNNEALAYACM 570  
 HQY LL+SP G A+ RR+LKAW + + P+ VYWQGLDSLCAFL +N +EALA+A +  
 Sbjct: 61 HQYHPLLNSPSGSAQLRRILKAWQIVYLRPEHVYWQGLDSLCAFLTVNNRDEALAFACL 120

Query: 571 SAFIPKYLYNFFLKDNHSHVIEYLTVFSQMIAFHDPELSNNHLNEIGFIPD 620  
 +AF+ +Y++ F+LKDNS VI+EYL F + A+HDP L HL GF P+  
 Sbjct: 121 NAFVNRYIHWFYLDKDNSEVIKEYLGKFYHLTAYHDPLLYQHLKINGFDPE 170

Fig. 17

Query: 27 NGLPLTPNSIKILGRFQILKTITHPRLCQYVDISRGKHER--LVVVAEHCCERSLEDLLRE 84  
 NGLPLTP + ++LGRF L+ + H LCQY+ RGKHER +VV EH +LED +  
 Sbjct: 1 NGLPLTPPAKQMLGRFPYLQELQHDHLCQYLHFIRGKHERDLTIVVMEHYGMNLEDYAKR 60 SEQ ID NO:20

Query: 85 RKPVSCSTVLCIAFEVLQGLQYMNKHGIVHRALSPHNILL----DRKGHIKAKFGLYHM 140  
 P + +++ G+ Y+++H IVH L P++I + +RK +KL +GL+HM  
 Sbjct: 61 HPPKDEAQNNNFYQIACGINYLHRHHIVHNLHPNHIYITDDGNRKLKSVKLFNYGLHMH 120

Query: 141 TAHGDDVDFFPIGYPYLAPEVIAQGIFKTTDHMXXXXXXXXXXXXXDVWSLGIILFELCVG 200  
 T +G FPIG Y+APE I D++ DVW LG I+ ++ +G  
 Sbjct: 121 TNYGKYTPFPPIGNRYMAPE----RILNDNDNLFAATYQS-----DVWELGFIMLQIYLG 171

Query: 201 RKL 203  
 +L  
 Sbjct: 172 IEL 174

Fig. 18

Query: 322 IEEVYYLWCLAGGDLEKELVNKEIIRSKPPICTLPNFLFEDGESFGQGRXXXXXXXXXXXX 381  
 + ++Y+LW LAGGD++ EL + +IRS+ PI LP + G S GR  
 Sbjct: 100 LSQIYHLWQLAGGDVQAECLKKEGLIRSEAPILGLPQIVRLSGASVCPGRSQAQLMDDRVV 159 SEQ ID NO:21

Query: 382 XXXXCQLNRNLKDVGEAFYPLLEDDQSNLPHSNSNNELSAAATLPLIIREKDTEYQLNR 441  
 L RL + ++PLL + P ++ EL LPL+IREKD EYQ R  
 Sbjct: 160 PLRLKALLQRLSGLPAAVYFPLLHSPR--FP-AHFARELQE---LPLVIREKDIEYQFQR 213

Query: 442 IILFDRLLKAYPYKKNQ 458  
 + LF RLL+ YP+ Q  
 Sbjct: 214 VRLFARLLQGYPTAEQ 230

Fig. 19

Query: 207 LDISERLKFLTLDCVDDTLIVLAEHGCGLDIIKELPETVIDLLNKCLTFHPSKRPTPE 266  
 L +S ++ +L + L +A EH C + ++ + + LL CL+ P +RP P E  
 Sbjct: 4 LKLSNVVRKILAFGKSNGALEKIAREQCHERYVQMDQRLRQLLESCLSVLPKRRPLPGE 63 SEQ ID NO:22

Query: 267 LMKDKVFSEV 276  
 L++ +F EV  
 Sbjct: 64 LLEHPIFEEV 73

Fig. 20

092670 0629T560

[illegible]

Fig. 21

Query: 621 LYAIPWFLTMFTHVPFLHKIFHLWDLTLLGNSSFPFCIGVAILQQLRDRLL-ANGFNECI 679  
 LYA WFLT+F PL + +WD S F + +A+L+ ++ L L A+ F E +  
 Sbjct: 1 LYAFQWFLTLFARELPLETVLRIWDCFFYEGSKILFRVALALLKMHKEELLQADDFEEML 60 SEQ ID NO:24

Query: 680 -LLFSDLP-----EIDIERCVRESINL 700  
 L + LP E D R + E+ N+  
 Sbjct: 61 EFLQNMLPKRYRSEEDARLLLEEACNI 87

Fig. 22

```

Query:      72 EHCERSLEDLLRERKPVSCSTV---LCIAFEVLQGLQYM---NKHGIVHRALSPHNILL 124
             E  E+  +  + E+K    S V  + IA+++ +GL+Y+    NK  I+HR L P NILL
Sbjct:     136 EMMEKLQKQSMSEKKMEEMSWVSQMLKAIYQIAKGLEYLHSSKNKQNIHRDLKPENILL 195  SEQ ID NO:25

Query:     125 DR----KGH-----IKLAKFGLYHM 140
             D      KG      +K+A FGL M
Sbjct:     196 DNNMVAKGDSEIKVVKIADFGLARM 220

```

Fig. 23

```

Query: 152 GYPSYLAPEVIAQGIFKTTDHMXXXXXXXXXXXXDVWSLGIILFELCVGRKLF--QSLDI 209
      G PSY+  + +      +  + +      DVWS G+IL+EL  G+  F    S  ++
Sbjct: 245 GTPSYV--KYVGTRWYMAPEVLMGSSYGQYSEKSDVWSFGVILYELLTGKPPFFPGSSEV 302  SEQ ID NO:26

Query: 210 SE-RLKFLLTDCVDDTLIVLAAEEHGCLDIIKE---LP----ETVIDLLNKCLTFHPSKR 261
      ++ ++  ++      V      +  +      + KE    P    E V DL+ KC    P KR
Sbjct: 303 NDSQMNEIMKETMVKSAEYEMPMPKMPPESSKESMSCPSMSSEAVKDLIKKCWQKDPEKR 362

Query: 262 PTPDELMKDKVFSEV 276
      PT  ++++++  E+
Sbjct: 363 PTFAQVVEELSAHEI 377

```

Fig. 24

```

Query:      740 PPKT-DLSRESIPLNDLKSEVSPRISAEDLIDLCELTVTGHFXXXXXXXXXXXXXXXXLLVVD 798
            PP+  D+    + L  L+ E  PRISA+D+  L  +                                L ++D
Sbjct:      29 PPQALDIGVADVVELKHLQQEQCPRISAKDVQFLLD-----NSPAELALID 73   SEQ ID NO:27

Query:      799 IRNSED FIRGHISGSINIPFSAFTAEGELTQGPYTAMLQNFKGKVIVIVGVHAKHTAEF 858
            +R+  +F R H+  SINIPF+      E  L      +      +GK++V V ++ +H+ E
Sbjct:      74 LRSVVEFGRVHVPHSINIPFATVQLGEORLEALQVPQLEAQLRGKIVVCVSNHQHSVEV 133

Query:      859 AAHLVKMK 866
            L ++K
Sbjct:      134 GHPLAQLK 141

```

Fig. 25

[illegible]

Fig. 27

```

Query: 506 EVDIPRCHQVDELLSSPEGHAKFRVRVLKAWVSHPD--LVYWQGLDSLCAFLYLNFNNE 563
      + DI C +Y+ P + + + L+ + V +P ++ + G APF YL
Sbjct: 336 DTDIGGCFEYNTF-PPPGKYIRGKLGLEEYAVFYPPNGVIPFHGFCMYAAPFCYLYHEPS 394 SEQ ID NO:30

Query: 564 ALAYACMSAFIPKYLYNFFLKDNSHV--IQEYLTVFSQMIAFHDPELSNHLNEIGFIPDL 621
      L Y +I +Y + N+H I +F +++ ++P+L H EIG P
Sbjct: 395 KLYYTFREFYI-RYCHRLHTI-NTHPQGIVSLCLLFEKLLQTYEPQLWYHFREIGAQPLR 452

Query: 622 YAIPWFLTMFTHVFPLHKIFHLWDTL LLGNS 652
      + W + F+ P ++ LWD +L NS
Sbjct: 453 ISFKWMMRAFSGHLPPDQLLLLWDRILGYNS 483

```

Fig. 29

Fig. 30

Query: 240 K E L P E T V I D L L N K C L T F H P S K R P T P D E L M K D K V F S E V 276  
K L+ CL P K R P+ L+ F ++  
Sbjct: 198 K T F S P A F F S L V Q L C L Q D P E K R P S A S S L L S H V F F K O M 234 SEQ ID NO:32

[illegible]

Fig. 32

```

Query:      112 IVHRALSPHNILLDRKGHIKLAFLGYHMTAHGDDVD--FPIGYP--SYLAPEVIAQGIF 167
           ++HR + P +IL+ ++G KLA F          + +D + FP Y          + P + +
Sbjct:      1  VIHRNICPESILITKRGSWKLAGFDFCVSAQNPNQENYFPCHYEWDPRIPPLPLQPNLD 60  SEQ ID NO:35

Query:      168 KTTDHMXXXXXXXXXXXXDVWSLGIILFELCVGRKLFQSLDISERLKFFLLTLCVDDTLI 227
           D++SLG +++ + G K          +D + ++          + +TL
Sbjct:      61 YLAPEYVTSSTCTVGSASDMFSLGCLIIYAIYNGGKPL--IDANNDEYKSNYNKYMNTLN 118

Query:      228 VLAEEHGCLDIIKELPETVIDLLNKCLTFHPSKRPTPDELMKDKVF 273
           L H ++ + PE + + L + L+ P+ RPT EL K F
Sbjct:      119 SLT--HESMNNLP--PENLKESLKRMLSMDPTVRPTAQELTLIKYF 160

```

Fig. 34

Query: 744 DLSRESIPLNDLKSEVSPRI--SAEDL-IDLCE 773  
DL + P D+KS + P + + ED I +C+  
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